

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
6 May 2005 (06.05.2005)

PCT

(10) International Publication Number  
**WO 2005/040398 A3**

(51) International Patent Classification<sup>7</sup>: **A01N 1/00**

(21) International Application Number:  
PCT/US2004/034605

(22) International Filing Date: 18 October 2004 (18.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10/686,904 16 October 2003 (16.10.2003) US  
10/722,154 25 November 2003 (25.11.2003) US  
10/721,557 25 November 2003 (25.11.2003) US  
10/721,678 25 November 2003 (25.11.2003) US

(71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 5th Floor, Oakland, CA 94607-5200 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CROWE, John, H.** [US/US]; 1111 Cottonwood Ct., Davis, CA 95616 (US). **TABLIN, Fern** [US/US]; 608 Huble Street, Davis, CA 95616 (US). **OLIVER, Ann, E.** [US/US]; 874 Parklin Avenue, Sacramento, CA 95831 (US). **JAMIL, Kamran** [US/US]; 1180 Matmor Road, #382, Woodland, CA 95776 (US). **MA, Xiaocui** [CN/US]; 690 Alvarado Avenue, Apt. #34, Davis, CA 95616 (US). **CLEGG, James, S.** [US/US]; 211 Condor Street, Bodega Bay, CA 94923 (US). **WOLKERS, Willem** [NL/NL]; Riemsdijkstraat 80, NL-6701 BC Wageningen (NL). **HTOO, Thurein** [US/US]; 425 Washington Blvd., Apt. 3706, Jersey City, NJ 07310 (US).

(74) Agents: **HYMAN, Laurence, J.** et al.; Townsend and Townsend and Crew LLP, 2 Embarcadero Center, 8th Floor, San Francisco, CA 94111 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

**Published:**

— with international search report

(88) Date of publication of the international search report:  
26 January 2006

**(15) Information about Correction:**

**Previous Correction:**

see PCT Gazette No. 34/2005 of 25 August 2005, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **METHODS FOR PRESERVING NUCLEATED MAMMALIAN CELLS**

(57) Abstract: Methods and compositions are provided for increasing the survival of nucleated mammalian cells following drying and rehydration. The methods include introducing a disaccharide such as trehalose into said cells, optionally including heat shock proteins, apoptosis inhibitors, and arbutin, drying said cells, and rehydrating them. The invention further provides nucleated mammalian cells that have increased capacity to survive, divide and, in some cases, differentiate, following drying and rehydration. The cells comprise a disaccharide and one or more of the following: a heat shock protein, an apoptosis inhibitor, and arbutin.

Best Available Copy

WO 2005/040398 A3